

Business 9704 – Research Methods (Part II)

Winter 2025

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Tuesdays 1:30pm – 4:30pm
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Course Learn page: <https://learn.ivey.ca/courses/5988>

1. COURSE DESCRIPTION

This course continues from the first half taught by Professor Zhang. We will spend most of this part of the course discussing data-related problems, how they impact inferences about the population being studied, and how they can be handled. While emphasis will be on quantitative research, the issues that we will address have implications for all social science and management research, regardless of method. Some technical material will be discussed when necessary, but focus will be largely placed on theoretical foundations and conceptual understanding.

2. COURSE REQUIREMENTS

Grades will be based on five elements:

1. Weekly seminar participation (20%)
2. Seminar lead (20%) – [10% for written notes; 10% for presentation]
3. Position papers (20%) - Due weekly at 8pm on the Sunday before class
4. Midterm test (20%) – in class on February 4
5. Final test (20%) – in class on April 1

Weekly topics and readings can be found on the course Learn site:
(<https://learn.ivey.ca/courses/5988>).

2.1 Weekly seminar participation (20%)

The course will only be successful if everyone participates. If you don't participate regularly, and on a weekly basis, you will get a poor grade. Still, opinion alone is not

enough. You will be evaluated on your ability to critique the readings and put them in a wider context.

2.2 Weekly seminar leader (20%)

- **10 points for preparation notes; 10 points for discussion**

Aside from regular weekly seminar participation, each student will take the role of seminar leader for one session. Although I will help when needed, you will be primarily responsible for guiding the discussion of that week's readings. Usually the discussion will take place during the first half of the class. You will have approximately 90 minutes to do so. The specific dates and readings for these roles will be determined in the first seminar on January 7th.

The seminar leader's role is to stimulate informed discussion and debate around the major ideas of the week's readings. Rather than summarize the readings separately, you should encourage students to consider how the readings overlap, complement each other, and/or contradict each other. I suggest that you prepare an extensive set of questions for the class [Hint: *do not* ask questions that have simple yes or no answers.]. You should not lecture, give a PowerPoint presentation or provide extensive handouts. However, you should start the seminar with a five-minute introduction that includes a summary of the general theme of the week's material, why the issues it covers are important, and the specific issues that the session will discuss.

You will be graded on both your written preparation (i.e., your seminar notes and the questions you plan to ask) and the oral discussion that takes place. These two elements are worth 10 points each. You are welcome to send me your seminar plan—which should include your seminar questions—before noon on the Sunday before your seminar so that I can provide feedback. You will be required to hand in the final version of notes at end of your seminar.

2.3 Position papers (20%)

- **10 papers x 2 grades each**

You are required to write **10 position papers** on the required readings. A position paper is required for all weeks except the week of the midterm test (February 4th) and the week of the final test (April 1st). You will receive 2 points for each satisfactorily completed paper. If I don't think enough effort was given, you will receive a grade of 0. The position papers should be two pages in length (typed, double-spaced, 12-point font) but no more. Papers less than a page will automatically receive a grade of 0. I will provide comments only on papers that have not been satisfactorily completed.

While all required readings should be covered in the position paper, the individual readings should not be discussed separately. Instead, you should draw connections between them (and, when possible, tie them to other topics discussed in the course) and raise problems or questions that you plan to raise in the seminar to stimulate discussion. IN

other words, I expect that you will help the seminar leader generate discussion. At the end of each position paper (but still within the two-page length), you must include three seminar discussion questions.

The weekly position papers are due before 8pm (London, ON time) on the Sunday before the class that deals with the corresponding readings. Late papers will not be accepted. The papers must be submitted on Learn (<https://learn.ivey.ca/courses/5988>). They must be submitted in PDF format.

2.4 Midterm test (20%) - February 4

The midterm will take place in class on **February 4**. It is worth 20 percent of your course grade. It will include short essay questions based on the readings and class discussions that took place before it (be sure to take notes on the readings!). You will be expected to answer the questions on your laptop and submit the completed test on Learn before you leave the class. You will be given 2 hours to write the test.

2.5 Final test (20%) - April 1

The final test will take place in class on **April 1**. Like the midterm test, it is worth 20 percent of your course grade. It will include short essay questions based on all the readings and class discussions from the course, including those from before the midterm exam. You will be expected to answer the questions on your laptop and submit the completed test on Learn before you leave the class. You will be given 2 hours to write the test.

3. COURSE SCHEDULE AND REQUIRED READINGS

I suggest that you read the sources in the order in which they appear in the list.

1. January 7 (session 13): What 'should' research look like?

- a. objectivity and subjectivity
- b. basic and applied research
- c. publication bias

Readings:

Gimbel, Edward W. (2016) 'Interpretation and Objectivity: A Gadamerian Reevaluation of Max Weber's Social Science,' *Political Research Quarterly*, 69 (1): 72-82.

Narayanamurti, V., T. Odumosu, and L. Vinsel (2013) 'RIP: The Basic/Applied Research Dichotomy,' *Issues in Science and Technology*, 29 (2): 31-36.

Fanelli, Daniele (2011) 'Negative results are disappearing from most disciplines and countries', *Scientometrics*, 90(3): 891-904.

Ouimet, Mathieu, Pierre-Olivier Bedard and Francois Gelineau (2011) 'Are the h-index and some of its alternatives discriminatory of epistemological beliefs and methodological preferences of faculty members? The case of social scientists in Quebec' *Scientometrics*, 88:91-106.

Joober, Ridha, Norbert Schmitz, Lawrence Annable and Patricia Boksa (2012) 'Publication bias: What are the challenges and can they be overcome?' *Journal of Psychiatry Neuroscience*, 37(3):149-52.

Fassin, Y. (2021) 'Does the Financial Times FT50 journal list select the best management and economics journals?' *Scientometrics* 126, 5911-5943.

2. **January 14 (session 14): Making inferences from sample data**
 - a. random samples and classical statistical inference
 - b. bootstrapping
 - c. sampling and inferences from qualitative data

Readings:

(a) survey data and statistical inference

Brick, J. Michael (2011) 'The future of survey sampling,' *Public Opinion Quarterly*, 75 (5): 872-888.

Andersen, Robert and David A. Armstrong II (2022) 'Chapter 1: Some Foundation,' in *Presenting Statistical Results Effectively*. London: Sage Publications.

Andersen, Robert (2008) '5. Standard errors for robust regression,' *Modern Methods for Robust Regression*. Sage (pp. 70-78).

(b) qualitative data

Marshall, Martin (1996) 'Sampling for qualitative research,' *Family Practice*, 13: 522-525.

Paluck, Elizabeth L (2010) 'The Promising Integration of Qualitative Methods and Field Experiments,' *The Annals of the American Academy of Political and Social Science*, 628: 59-71.

Alexander, J. Trent , Robert Andersen, Peter W. Cookson, Jr., Kathryn Edin, Jonathan Fisher, David B. Grusky, Marybeth Mattingly, and Charles Varner (2017) 'A Qualitative Census of Rural and Urban Poverty,' *The ANNALS of the American Academy of Political and Social Science*, 672 (1): 143-161

3. January 21 (session 15): Measuring concepts

- a. validity and reliability
- b. collinearity
- c. common method variance
- d. single indicators vs composite measures

Readings:

(a) reliability, validity, and collinearity

Hammersley, Martyn (1987) 'Some Notes on the Terms 'Validity' and 'Reliability',' *British Educational Research Journal* 13 (1): 73-81.

Bedeian, Arthur G. (2014) "'More Than Meets the Eye": A Guide to Interpreting the Descriptive Statistics and Correlation Matrices Reported in Management Research,' *Academy of Management Learning & Education*, 13(1): 121-135.

Conway, James M. and Charles E. Lance (2010) 'What Reviewers Should Expect from Authors Regarding Common Method Bias in Organizational Research,' *Journal of Business and Psychology*, 25(3):325-334.

(b) composite measures

Peterson, Robert A. (1994) 'A Meta-Analysis of Cronbach's Coefficient Alpha,' *Journal of Consumer Research*, 21 (2): 381-391.

Markle, Gail L. (2013) 'Pro-Environmental Behavior: Does It Matter How It's Measured? Development and Validation of the Pro-Environmental Behavior Scale (PEBS),' *Human Ecology*, 41 (6): 905-914.

Wright, Thomas, James Campbell Quick, Sean T. Hannah and M. Blake Hargrove (2017) 'Best practice recommendations for scale construction in organizational research,' *Journal of Organizational Behavior*, 38 (5):615-628.

4. January 28 (session 16): Survey research

- a. Question wording, placement and response format
- b. Knowledge-based questions

- c. Sensitive questions
- d. Mode effects

Readings:

Bishop, George F., Alfred J. Tuchfarber and Robert W. Oldendick (1986) 'Opinions on Fictitious Issues: The Pressure to Answer Survey Questions,' *Public Opinion Quarterly*, 50: 240-250.

DeLeeuw, Edith D. (2018) 'Mixed-Mode: Past, Present, and Future,' *Survey Research Methods*, 12(2): 75-89.

Jabkowski, Piotr and Aneta Piekut (2024) 'Between Task Complexity and Question Sensitivity: Nonresponse to the Income Question in the 2008–2018 European Social Survey,' *Survey Research Methods*, 18: 113-135.

Stern, Michael J., Don A. Dillman and Jolene D. Smyth (2007) 'Visual Design, Order Effects, and Respondent Characteristics in a Self-Administered Survey,' *Survey Research Methods*, 1(3): 121-138.

5. February 4 (session 17): Midterm test

- 6. **February 11 (session 18): Data issues and regression analysis** (Guest lecturer: Anders Holm)
 - a. types of missingness
 - b. consequences of missingness and measurement error
 - c. selection bias

Readings:

Altman, Douglas G. and J. Martin Bland (2007) 'Statistics Notes: Missing data,' *British Medical Journal*, 334 (7590): 424.

Little, Roderick J. A. (1992) 'Regression With Missing X's: A Review,' *Journal of the American Statistical Association*, 87 (420): 1227-1237.

Hausman, Jerry (2001) 'Mismeasured Variables in Econometric Analysis: Problems from the Right and Problems from the Left,' *The Journal of Economic Perspectives*, 15 (4): 57-67.

Solon, Gary, Steven J. Haider and Jeffrey Wooldridge (2013) 'What are we weighting for? *NBER working paper 18859*. National Bureau of Economic Research. <http://www.nber.org/papers/w18859>

Jordan, et al. (2013) 'Volunteer Bias in Recruitment, Retention, and Blood Sample Donation in a Randomised Controlled Trial Involving Mothers and Their Children at Six Months and Two Years: A Longitudinal Analysis,' *PLoS ONE*, 8(7): e67912.

7. February 18 (session 19): READING WEEK

8. February 25 (session 20): Outliers and nonlinearity

- a. importance of graphical methods
- b. detecting and accommodating nonlinearity
- c. influential outliers and 'solutions'

Readings:

Anscombe, F. J. (1973) 'Graphs in Statistical Analysis,' *The American Statistician*, 27(1): 17-21.

Andersen, Robert (2009) 'Nonparametric Methods for Modelling Nonlinearity in Regression Analysis,' *Annual Review of Sociology*, 35: 67-85.

Jasso, G. (1985) 'Marital Coital Frequency and the Passage of Time: Estimating the Separate Effects of Spouses' Ages and Marital Duration, Birth and Marriage Cohorts, and Period Influences,' *American Sociological Review*, 50: 224-241.

Kahn, J.R. and J.R. Udry (1986) 'Marital Coital Frequency: Unnoticed Outliers and Unspecified Interactions Lead to Erroneous Conclusions,' *American Sociological Review*, 51: 734-737

Jasso, G. (1986) 'Is It Outlier Deletion or Is It Sample Truncation? Notes on Science and Sexuality,' *American Sociological Review*, 51:738-42.

Leone, Andrew J., Miguel Minutti-Meza and Charles E. Wasley (2019) 'Influential Observations and Inference in Accounting Research,' *The Accounting Review*, 94(6): 337-365.

9. March 4 (session 21): Assessing importance and displaying results

- a. substantive or practical importance
- b. relative importance
- c. effect displays

Readings:

(a) substantive importance

Wood, John, Nick Freemantle, Michael King and Irwin Nazareth (2014) 'Trap of trends to statistical significance,' *BMJ: British Medical Journal*, 348: 1-6.

Neely, Stephen (2019) 'Science vs Significance,' *Public Administration Quarterly*, 43 (2): 185-221.

(b) effective presentation of meaningful results

Andersen, Robert and David A. Armstrong II (2022) '5.5 Relative Importance of Predictors,' Pp 118-122 in *Presenting Statistical Results Effectively*. London: Sage Publications

Andersen, Robert and David A. Armstrong II (2022) '6 Assessing the Impact and Importance of Multi-category Explanatory Variables,' Pp 135-167 in *Presenting Statistical Results Effectively*. London: Sage Publications

Fox, John (1987) 'Effect Displays for Generalized Linear Models,'" *Sociological Methodology*, 17: 347-61.

10. March 11 (session 22): Causality and spurious relationships

- a. causal relationships
- b. Hawthorne and placebo effects
- c. Simpson's paradox
- d. mediation and moderation; interaction effects

Readings:

(a) causality

Cox, D. R. and Nanny Wermuth (2001) 'Some Statistical Aspects of Causality,' *European Sociological Review*, 17 (1): 65-74.

Brym, Robert (2018), 'Chapter 5: The Social Bases of Cancer,' Pp. 81-102 in Robert Brym, *Sociology as a Life or Death Issue*, 4th Canadian ed. Toronto: Nelson.

Wickstrom, Gustav and Tom Bendix (2000) 'The "Hawthorne effect" - what did the original Hawthorne studies actually show?' *Scandinavian Journal of Work Environment and Health*, 26(4): 363-367.

(b) mediation, moderation, and interaction effects

Bandyopadhyay, Prasanta S. , Mark Greenwood, Don Wallace F. Dacruz and Venkata Raghavan R. (2015) 'Simpson's Paradox and Causality,' *American Philosophical Quarterly*, 52 (1): 13-25.

Wagner, Clifford H. (1982) 'Simpson's Paradox in Real Life,' *The American Statistician*, 36 (1): 46-48.

Dawson, Jeremy F. (2014) 'Moderation in Management Research: What, Why, When, and How,' *Journal of Business and Psychology*, 29 (1): 1-19.

11. March 18 (session 23): Assessing difference over time (Guest lecturer: Anders Holm)

- a. longitudinal data, repeated cross-sectional and panel data
- b. random effects, fixed effects
- c. difference-in-difference

Readings:

Bell, Andrew and Kelvyn Jones (2014) 'Explaining Fixed Effects: Random Effects Modeling of Time-Series Cross-Sectional and Panel Data,' *Political Science Research and Methods*, 3 (1): 133 - 153.

Kandker et al. (2010) '5. Double Difference,' Pp 71-86 in *Handbook on impact evaluation: Quantitative Methods and Practice*. World bank.

Foverskov et al. (2017) 'Socioeconomic position across the life course and cognitive ability later in life: the importance of considering early cognitive ability,' *Journal of Ageing and Health*, 31(6): 1:20.

12. March 25 (session 24): Cross-national and comparative research

- a. logic of comparative method
- b. survey comparability
- c. contextual versus compositional effects
- d. multilevel models

Readings:

(a) comparative data

Collier, David (1993) 'The Comparative Method,' Pp 105-119 in *Political Science: The State of the Discipline*. UC Berkeley. Report #: 5. Retrieved from <https://escholarship.org/uc/item/25v8z2xs>

Smith, Shawna N., Stephen D. Fisher & Anthony Heath (2011) 'Opportunities and challenges in the expansion of cross-national survey research,' *International Journal of Social Research Methodology*, 14:6, 485-502.

(a) inference from contextual data

Stipak, B., & Hensler, C. (1982). 'Statistical Inference in Contextual Analysis,' *American Journal of Political Science*, 26(1): 151-175.

Peugh, James L. (2010) 'A practical guide to multilevel modeling,' *Journal of School Psychology*, 48: 85-112.

13. April 1 (session 25): Final test (in class)

4. ENROLLMENT RESTRICTIONS

Enrollment in this course is restricted to graduate students in the Ivey PhD Program, as well as any student that has obtained special permission to enroll in this course from the course instructor as well as the Graduate Chair (or equivalent) from the student's home program.

5. ACADEMIC OFFENCES: PLAGIARISM AND ACADEMIC INTEGRITY

Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at <https://grad.uwo.ca/administration/regulations/13.html>

All required papers may be subject to submission for textual similarity review to the commercial plagiarism-detection software under license to the University for the detection of plagiarism. All papers submitted for such checking will be included as source documents in the reference database for the purpose of detecting plagiarism of papers subsequently submitted to the system. Use of the service is subject to the licensing agreement, currently between The University of Western Ontario and Turnitin.com (<http://www.turnitin.com>).

6. SUPPORT SERVICES: HEALTH AND WELLNESS

Students who are in emotional/mental distress should refer to Health and Wellness at Western University <https://www.uwo.ca/health/psych/index.html> for a complete list of options about how to obtain help. Additionally, students seeking help regarding mental

health concerns are advised to speak to someone they feel comfortable confiding in, such as their faculty supervisor, their program director (graduate chair), program coordinator or other relevant administrators in their unit.

As part of a successful graduate student experience at Western, we encourage students to make their health and wellness a priority. Western provides several on campus health-related services to help you achieve optimum health and engage in healthy living while pursuing your graduate degree. See <https://www.uwo.ca/health>.

7. ACCESSIBLE EDUCATION WESTERN (AEW)

Western is committed to achieving barrier-free accessibility for all its members, including graduate students. As part of this commitment, Western provides a variety of services devoted to promoting, advocating, and accommodating persons with disabilities in their respective graduate program.

Graduate students with disabilities (for example, chronic illnesses, mental health conditions, mobility impairments) are strongly encouraged to register with Accessible Education Western (AEW), a confidential service designed to support graduate and undergraduate students through their academic program. With the appropriate documentation, the student will work with both AEW and their graduate programs (normally their Graduate Chair and/or Course instructor) to ensure that appropriate academic accommodations to program requirements are arranged. These accommodations include individual counselling, alternative formatted literature, accessible campus transportation, learning strategy instruction, writing exams and assistive technology instruction.